

**Flood Control Project Maintenance  
Levee Inspections**

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2017

### Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start		Rating **	A	Issue No.	14
LM End		Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Operations & Maintenance Manuals			°	°
DWR ID	DWR_RD1660_01_s_2013_14				
Comment Code					
Inspector Comment					
The LMA has the O&M manuals.					

No Photos

LM Start		Rating **	A	Issue No.	15
LM End		Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Emergency Supplies & Equipment			°	°
DWR ID	DWR_RD1660_01_s_2013_15				
Comment Code					
Inspector Comment					
The LMA has adequate emergency supplies and equipment.					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start		Rating **	A	Issue No.	16
LM End		Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Flood Preparedness & Training				
DWR ID	DWR_RD1660_01_s_2013_16				
Comment Code					
Inspector Comment					
The LMA has completed flood fight training in 2014.					

No Photos

LM Start	0.14	Rating **	M	Issue No.	21
LM End	0.14	Issue Type +	Ma	Location *	LS
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	DWR UCIP LMA Responsibility		39.061322 °	39.061322 °	
			-121.837993 °	-121.837993 °	
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:46670 DS_ID:22489 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: - needs proper abandonment.- opening of landside pipe almost buried. FIELD_STRUCT_DESC: *ABANDONED* 24-inch pipe thru levee, 16.4 FBC. Slide gate in concrete well at toe of WW slope. (IV A-Winship). USACE bench mark on top of headwall at LS toe. O&M Manual SAC 133, August 1955. FS Date: 10/10/2013					

Photo 1 of 3 : UCIP\_SP\_2017\_46670\_38107.jpg



WS view: concrete box on levee slope. No pipe found on berm and river bank.

* Location	** Rating	+ Issue Type
LS : Land Side WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
N/A : Not Applicable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	

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Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.14	Rating **	M	Issue No.	21 (cont)	
LM End	0.14	Issue Type +	Ma	Location *	LS	
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			39.061322 °	39.061322 °	
				-121.837993 °	-121.837993 °	
DWR ID						
Comment Code						
Inspector Comment						
FS_ID:46670						
DS_ID:22489						
EP_NO: N/A						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: - needs proper abandonment.- opening of landside pipe almost burried.						
FIELD_STRUCT_DESC: *ABANDONED* 24-inch pipe thru levee, 16.4						
FBC. Slide gate in concrete well at toe of WW slope. (IV A-Winship).						
USACE bench mark on top of headwall at LS toe. O&M Manual SAC						
133, August 1955.						
FS Date: 10/10/2013						

Photo 2 of 3 : UCIP\_SP\_2017\_46670\_38106.jpg



WS view: two slide gates in concrete box on levee slope.

LM Start	<b>0.14</b>	Rating **	M	Issue No.	<b>21 (cont)</b>
LM End	<b>0.14</b>	Issue Type +	Ma	Location *	LS

Photo 3 of 3 : UCIP\_SP\_2017\_46670\_38105.jpg



WS view: closer view of two slide gates in concrete box on levee slope.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.61	Rating **	A	Issue No.	19
LM End	0.61	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.054537 °	39.054537 °
				-121.839288 °	-121.839288 °
DWR ID	DWR_RD1660_01_s_2017_19				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					
There are native grasses on both slopes.					

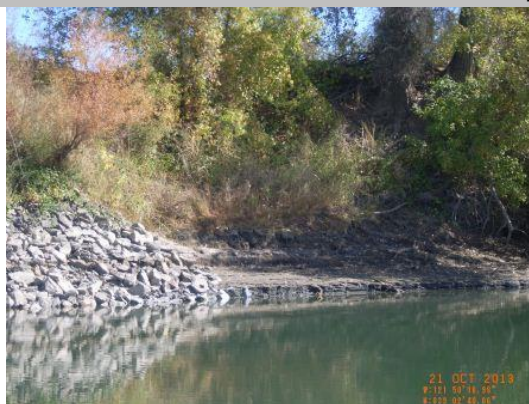
Photo 1 of 1 : SP\_2017\_RD1660\_8\_19\_20170410\_00017.jpg



View of the native grasses on both slopes.

LM Start	1.33	Rating **	M	Issue No.	8
LM End	1.36	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2015 USACE Erosion Survey, DRAFT			39.044361 °	39.043916 °
				-121.837654 °	-121.837305 °
DWR ID	DWR_RD1660_01_s_2016_8				
Comment Code					
Inspector Comment					
2009 - Erosion on levee toe where an old cobble site is failing. 2011 - Some new minor erosion. 2012 - Site extended downstream, bank is being impacted from the weight of the trees. 2013 - Minor new erosion at the toe. 2015: Minor new erosion at the toe. [2015 Site ID: SAC_120-6_L]					

Photo 1 of 1 : SP\_2017\_RD1660\_8\_8\_20170315\_00004.jpg



USACE 2013 Photo #1

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

LM Start	2.37	Rating **	M	Issue No.	2
LM End	2.37	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.034107 °	39.034107 °
				-121.825152 °	-121.825152 °
DWR ID	DWR_RD1660_01_s_2012_2				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

Photo 1 of 1 : SP\_2017\_RD1660\_8\_2\_20170315\_00002.jpg



View of the toe cut by the farmer on the landside.

LM Start	2.39	Rating **	M	Issue No.	4
LM End	2.39	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.033858 °	39.033858 °
				-121.824985 °	-121.824985 °
DWR ID	DWR_RD1660_01_s_2012_4				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

No Photos

LM Start	2.63	Rating **	M	Issue No.	5
LM End	2.66	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.030891 °	39.030436 °
				-121.822956 °	-121.822617 °
DWR ID	DWR_RD1660_01_s_2012_5				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

No Photos

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable                      N : Not Inspected/Rated M : Minimally Acceptable        C : Corrected U : Unacceptable                  A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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Unit No. 01 Sacramento River	Left	2.94	04/06/2017 04/06/2017	Bob Duffey

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable                      N : Not Inspected/Rated M : Minimally Acceptable        C : Corrected U : Unacceptable                  A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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### Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.00	Rating **	M	Issue No.	6
LM End	0.00	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.032910 °	39.032910 °
				-121.743665 °	-121.743665 °
DWR ID	DWR_RD1660_02_f_2016_6				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

Photo 1 of 2 : SP\_2017\_RD1660\_9\_6\_20170315\_00002.jpg



View of the slope instability looking from the landside toe.

LM Start	<b>0.00</b>	Rating **	M	Issue No.	<b>6 (cont)</b>
LM End	<b>0.00</b>	Issue Type +	Ma	Location *	LS

Photo 2 of 2 : SP\_2017\_RD1660\_9\_6\_20170315\_00003.jpg



Another view of the slope instability looking from the levee crown.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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### Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2017

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.02	Rating **	A/W	Issue No.	20 (cont)
LM End	0.02	Issue Type +	Ma	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.033214 °	39.033214 °
				-121.743541 °	-121.743541 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:22663 DS_ID:22495 EP_NO: 10020 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: - pipe/opening not visible as it was submerged into water on both sides.- it seems that 36-inch concrete pipe through the levee. It needs confirmation from LMA/DWR Inspector.- USED bench mark on landside concrete vault. FIELD_STRUCT_DESC: 4 by 7 foot concrete outfall structure through levee, 34 feet below crown. Slide gate in 4 ft. by 8 ft. concrete riser on waterside slope. (App. 10020-Bandoni). O&M Manual SAC 133, August 1955. FS Date: 10/10/2013					

WS view: closer view of U shaped concrete headwall in bypass channel.  
Pipe not visible.

LM Start	0.04	Rating **	A/W	Issue No.	8
LM End	0.04	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.033502 °	39.033502 °
				-121.743665 °	-121.743665 °
DWR ID	DWR_RD1660_02_f _ 2016_8				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					
Repair the site before flood season.					

View of the levee from the landside toe. Beaver hole is where the reflective traffic cone is.

* Location	** Rating	+ Issue Type
LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable                      N : Not Inspected/Rated M : Minimally Acceptable        C : Corrected U : Unacceptable                  A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement

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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	0.04	Rating **	A/W	Issue No.	8 (cont)	
LM End	0.04	Issue Type +	Ma	Location *	LS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start		End
Item	Slope Stability			39.033502 °		39.033502 °
				-121.743665 °		-121.743665 °
DWR ID	DWR_RD1660_02_f_2016_8					
Comment Code						
S1 : Repair slope instability.						
Inspector Comment						
Repair the site before flood season.						

Photo 2 of 2 : SP\_2017\_RD1660\_9\_8\_20170315\_00005.jpg



View of a beaver hole along the toe road outside of the levee easement.

LM Start	9.07	Rating **	A/W	Issue No.	22
LM End	9.07	Issue Type +	Ma	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.136861 °	39.136861 °
				-121.833974 °	-121.833974 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:22708					
DS_ID:22505					
EP_NO: N/A					
Repair Type: No Action Needed					
Crossing Status: Found					
UCIP Comments: - inlet structure 160 ft off the levee center on landside drainage ditch.					
FIELD_STRUCT_DESC: 48-inch steel pipe through the levee, 29.0 feet below the crown. Slide gate and concrete bulkhead on channel bank.					
Staff gage on the waterward berm. ABO# 10021. O&M Manual SAC 133, August 1955.					
FS Date: 10/15/2013					

Photo 1 of 3 : UCIP\_SP\_2017\_22708\_38406.jpg



WS view: overview of concrete box on channel bank. It looks like a fish ladder. Pipe discharges into this box.

* Location LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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### Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	04/06/2017 04/06/2017	Bob Duffey

LM Start	9.07	Rating **	A/W	Issue No.	22 (cont)
LM End	9.07	Issue Type +	Ma	Location *	LS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.136861 °	39.136861 °
				-121.833974 °	-121.833974 °
DWR ID					
Comment Code					
Inspector Comment					
FS_ID:22708					
DS_ID:22505					
EP_NO: N/A					
Repair Type: No Action Needed					
Crossing Status: Found					
UCIP Comments: - inlet structure 160 ft off the levee center on landside drainage ditch.					
FIELD_STRUCT_DESC: 48-inch steel pipe through the levee, 29.0 feet below the crown. Slide gate and concrete bulkhead on channel bank.					
Staff gage on the waterward berm. ABO# 10021. O&M Manual SAC 133, August 1955.					
FS Date: 10/15/2013					

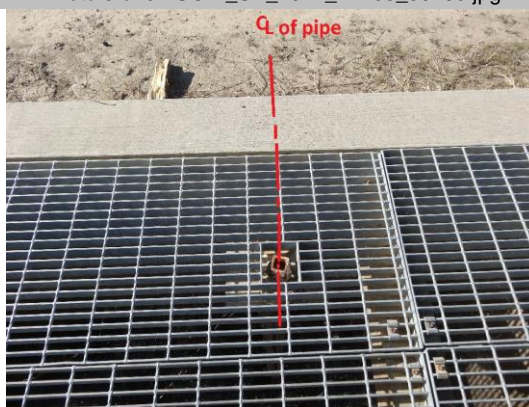
LM Start	<b>9.07</b>	Rating **	A/W	Issue No.	<b>22 (cont)</b>
LM End	<b>9.07</b>	Issue Type +	Ma	Location *	LS

Photo 2 of 3 : UCIP\_SP\_2017\_22708\_38405.jpg



WS view: concrete box on channel bank. Pipe end with slide gate. Pipe discharges into this box.

Photo 3 of 3 : UCIP\_SP\_2017\_22708\_38409.jpg



WS view: concrete box on channel bank. Pipe discharges into this box. A slide gate inside this box.

<b>* Location</b> LS : Land Side    N/A : Not Applicable WS : Water Side CR : Crown	<b>** Rating</b> A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	<b>+ Issue Type</b> Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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